"Water is a commodity so precious that no tyrant has ever dared deny it to his people. The earliest records of our civilization are linked to the spring and the waterhole, the river and the well... Wars have been fought over water rights and mighty nations have vanished because their water resources failed. In view of these facts, can you afford the luxury of irrigation TAILWATER?" 

(High Plains Underground Water District, Lubbock, Texas)

NEW CONCEPTS in the water and power field may significantly affect Colorado's future water development picture. Pumped storage looms large on the changing water scene. The pumped storage concept isn't new. But feasibility has had to wait for advances in equipment technology. Reversible pump-turbines have provided the technical key that has unlocked the economic door which has long barred access to the potential advantages of pumped storage power.

Pumped storage opens a wide door to make-it-yourself developers of artificial hydro. They can use off-peak steam electric, nuclear or excess hydro energy to pump water uphill to reservoirs occupying previously overlooked sites. Then they can let the water run back downhill through hydro plants during prime on-peak time. Hydro is ideal for peaking because it can be brought on the line from a standing cold start in a matter of minutes, and taken off just as quickly. Steam electric units do not have this flexibility.
Most of the current interest in pumped storage appears to be centered in eastern states. Consolidated Edison Co. of New York has the most striking pumped storage plan. It includes eight pumping-generating units with a total rated generating capacity of 1.8 million kw. This $145 million Hudson River project will have no natural hydro. It will simply elevate water as a means of storing energy, then return it by the same path. Philadelphia Electric Co. is planning a 100,000 kw off-channel pumped storage hydro station upstream from Conowingo Dam on the Susquehanna River. Many other eastern pumped storage developments are underway. Here in Colorado, Colorado-Big Thompson project's Flatiron-Carter Lake reversible pump-turbine unit, located west of Loveland, was a pioneering effort. Rocky Mountain Power Co. of Denver is planning to introduce pumped storage electric power to western Colorado. RMPCo is completing plans and specifications for the pumped storage phase of its proposed Sweetwater hydroelectric project on Sweetwater Creek, a Colorado River tributary which enters above Dotsero.

COAL SLURRY PIPELINE concept has reached feasibility stage in eastern states, due to recent technological advances. After nearly a decade of research and experimentation, an eastern company (Consolidation Coal) discovered how to transform powered coal into a slurry by the addition of equal amounts of water and then pump this new material through pipelines from mine to market. Breakthrough
came last October when Jersey Central P&LCo successfully fired
liquid coal directly from a pipeline into a furnace. Remaining
obstacle in the West is passage of congressional legislation granting
eminent domain rights to coal pipelines. If this legislation is pas­sed, Colorado water users may find that there is a new transbasin use
for water—carrying Colorado coal through pipelines to California
powerplants.

COLORADO LEGISLATURE: State Department of Natural Resources
is expected to be abolished soon. House has given preliminary
approval to an abolishment bill. Resources director will be replaced
by a natural resources coordinator in the governor's office... State Parks and Recreation Dep't might also be abolished, with most of
its functions transferred to the Game & Fish Dep't... Inter-County
Regional Planning Commission has asked the legislature to examine
the problem of authorizing and controlling special districts of all
types... Tax exempt status of properties owned by public organi­izations may be studied by the Legislative Council, with instructions
to report findings to the legislature next January... Water
fluoridation opponents are expected to introduce legislation erecting
hurdles to fluoridation of public water supplies. Chief anti-
fluoridator: Dr. D. C. Granger, Wheat Ridge dentist. Recently intro­duced resolution calls for a two-year study (by Legislative Council)
of the fluoridation of public water supplies in Colorado.

... Legal advertising rate hike proposed in a bill introduced by
Senator Ted Gill of Hillrose would probably increase the cost of notices for adjudication proceedings and change in point of diversion cases.

OTHER STATES: Wyoming legislature is considering bills requiring rotation among counties of appointments to its Natural Resources Board and bills allowing irrigation districts to build and operate electric power generating facilities . . . North Dakota legislature is considering a bill that would set up a preference of water use for humans and livestock and would provide for termination of abandoned water rights. Another ND bill proposes a number of administrative changes in state water laws. One change would authorize political subdivisions to join each other or the state in making surface and ground water surveys and in building dams, waterworks and other water projects . . . California ground water basin protection law, in effect 1½ years, gives the state department of water resources authority and appropriations to investigate, design and construct any project that the department considers to be practical, economically feasible and urgently needed to protect the ground water basins of the state . . . Colorado ground water law has received some out-of-state criticism.

Johnson Drillers' Journal: "Mr. Glenn Saunders of the Denver Water Board recently said that thousands of wells in Colorado produce water which is in reality part of the surface water resource in rivers. He indicated that the surface water belongs to persons holding valid water rights and inferred that ground water users are violating these rights. Until new controls can be set up, he said that injunctions against well owners appear to be the only means of relief."
"The Colorado ground water law has been criticized from several quarters. Some time ago, a special assistant attorney general of Kansas commented that the present law is more impressive on a first reading than it is after close study. The following is quoted from his remarks:

"The law provides for representative participation by various bodies concerned with ground water resource development but it seems to lack the necessary standards that would serve to guide those bodies. For this reason, the act seems rather more an abandonment of legislative authority than a framework for the necessary control and regulation of ground water resources. The important question is--does the appropriation doctrine or some one of the common law doctrines apply to percolating, non-tributary ground water? Successful regulation requires an answer to this question but the General Assembly has made no direct attempt to formulate an answer.

"The Colorado solution of dividing administrative decisions among ground water commissions, local advisory boards, and the state engineer with respect to development in critical areas seems more satisfying on paper than it may prove to be in practice. Unless one of these three assumes and maintains effective leadership in critical areas, policies are liable to become unwholesomely entangled, regardless of the relative values of those policies to the people of the area and the state with respect to conservation and development of ground water resources." (January-February 1963, St. Paul, Minnesota)

Kansas Water Resources Board has recommended to the Kansas legislative committee that the state assume the nonfederal responsibility for development of future water supply storage in major reservoirs, with provisions for future repayment from specific users.

... Oklahoma Water Resources Board wants the Oklahoma legislature to consider a plan for financing those future water supply storage costs in all reservoirs, large or small, beyond the ability of local communities, industries, water districts and others to finance at this time. When new needs for additional water supplies develop, long-term repayment contracts would be made, whereby users of this storage
would repay the state for its costs of providing the storage. This would be regarded as a capital investment by Kansas which would be recovered as the general economy grows and more water is needed.

Utah Water and Power Board has prepared a 20-page booklet entitled, "Developing a State Water Plan, Summary and Recommendations." It is the result of an 18-month study.

Utah Water Users Assn's quarterly publication, Utah Water News, is sent to over 3,800 persons.

California Water Rights Tax Relief Assn has been formed to fight "export taxes" levied by counties of water origin against water taken out of these counties by public agencies or mutual water companies.

Idaho University sponsors a five-day summer conservation camp for high school boys that tells the water conservation story and explores career opportunities.

Texas Water Development Board has loaned $13 million to help finance small water projects in Texas.

Texas Water Conservation Assn's executive director, Max Starcke, has had a dam named after him by the Lower Colorado River Authority.

Arizona Health Dep't and Arizona womens organizations have sponsored an Arizona clean water symposium, first of its kind west of the Mississippi River.

New Hampshire legislature is being asked to do something about salt in wells. Replacement of household wells contaminated by highway salt is costing NH $200,000 a year.

Interior Secretary Udall's recently announced plan for studying long-range regional water and power development in the five-state lower Colorado River basin has been labeled "a dramatic bid to keep future Colorado River water resources in its own (Interior Dep't) hands"
(Engineering News - Record, 1-31-63). The multibillion-dollar project will probably be called the Lower Colorado River Storage Project.

WATER PEOPLE: Hugh M. Sloan, 58, well known president of Henrylynn Irrigation District and member of the South Platte steering committee, died recently of a heart attack. ... Another heart attack victim: Allyn Cole, 77, a western Colorado attorney prominent in oil shale and water development. ... Gordon H. Scheer, Colorado Water Congress executive director, has been elected president of the Assn. of CPA Society Executives. Scheer also is executive director of the Colorado Society of Certified Public Accountants. ... Graydon E. Burnett, newly appointed chief research engineer for the Bureau of Reclamation (Denver Federal Center), is an expert in the field of prevention of corrosion of pipelines which carry irrigation water. ... Interior Secretary Udall denies rumors that he will leave his post next year to run against Sen. Barry Goldwater for Arizona's U.S. Senate seat and that he will be succeeded by Sen. Clair Engle of California. ... Felix L. Sparks, Colorado director of natural resources, is expected to return to his old job as director of the Colorado Water Conservation Board by March 1. ... Ed C. Johnson is being seriously considered by Gov. Love for retention as Colorado member of the Upper Colorado River Commission.

COLORADO WATER CONGRESS: District 16 luncheon meeting at Grand Junction, Jan. 28, was attended by 60 people. Ray Gobbo, Grand Junction rancher was elected district chairman. Anthony Williams, Grand Junction attorney, was elected to the rules committee...
District 12 meeting at Montrose, Jan. 28 evening, was attended by 40 persons. Election results: Jack Hughes, Montrose attorney re-elected district chairman, Charles Conklin, Delta attorney, rules committee member. District 13 luncheon meeting at Gunnison, Jan. 29, drew 65 persons. District 13 chairman: Rial Lake, Western State College public relations officer. Rules committee member: Tom Lively, Gunnison rancher. Felix L. Sparks spoke at the Grand Junction, Montrose and Gunnison district meetings. Significant comment by Sparks at the Grand Junction meeting: "Misinformation spread by well-meaning persons makes solution of many water problems more difficult." District 17 meeting will be held at Craig, March 4, with John Barnard, Jr., Denver attorney, as speaker. District 6 meeting at La Junta, March 6, will have as speaker Glenn Saunders, Denver Water Board attorney. District 8 meeting at Salida, March 20, will have Felix L. Sparks as speaker.

WATER LITIGATION: Game and fish pollution suit was resumed Feb. 4 in district court at Glenwood Springs, following recess last December. East Rifle Creek landowners charge that their water supplies have been damaged from organic matter dumped into the Colorado Game & Fish Dept's hatchery on Rifle Creek. Damages totaling $305,532 are sought. Grand Junction noisome stench suit is set for trial on April 15. Twenty seven plaintiffs seek $160,000 damages attributed to odors from the city's sewage disposal plant. Denver Water Board won a $111,644 damage suit in U.S. District Court,
brought by the contractor for construction of Hillcrest Reservoir in Arapahoe County. Ute Water District has petitioned district court in Grand Junction to open a supplemental water adjudication proceeding for Water District 42, which comprises most of Mesa County. Presentation of evidence begins March 20.

Symposium on water law to be held in connection with the mid-winter conference of the National District Attorneys Assn., March 10-14, Los Angeles, will feature nationally prominent speakers. Utah has been denied a U.S. Supreme Court hearing on its claim to title to the bed of the San Juan River. Utah appeal from adverse lower court decisions was based on the principle of constitutional equality of states. Oregon Supreme Court upheld legality of a $360,000 bond issue sold to finance swimming pools at two schools, ruled swimming pools are buildings. A taxpayer who challenged the bonds argued to the contrary. Constitutionality of South Dakota's water use law was upheld by a circuit court judge who ruled that water in the state belongs to the public and not to any individual, except rights vested prior to enactment of the state water act in 1955. That law set up a new set of regulations governing water use in South Dakota. Maine attorney general recently ruled out state reimbursement for water wells ruined by highway salt. Ohio citizen has sued City of Akron for $25,000 for "destroying animal and aquatic life and depositing black, foul-smelling, slimy gelatinous sludge a foot deep" on the shores of his 175 acres along the Cuyahoga
River. He's won two previous pollution suits against Akron.

A California city (Beaumont) has filed action for condemnation of land and all other properties of an irrigation district, claiming that public use by the city "is a more necessary public use than any other use to which the property can be put" ... Rio Grande Valley water rights suit is expected to be tried next September. Suit filed in 1956 seeks to determine rights to Rio Grande flow below Falcon Dam. More than 2,000 parties and 50 attorneys are involved in the complicated case which is expected to set Texas water law precedent ... Federal Power Commission recently heard oral arguments in a case involving determination of headwater benefit payments to be made by an eastern power company (South Carolina G&E). FPC examiner ruled last year that the power company should pay $141,465 for headwater benefits received over a 27-month period due to construction and operation of an upstream project ... FPC recently heard oral arguments on its examiner's precedent-setting decision requiring Pacific P&LCo to build, operate and maintain a fish hatchery at PP&L's Iron Gate Dam on the Klamath River in California. ... Interior Dep't has intervened in a FPC license application by irrigation districts in California for Don Pedro Dam. License is opposed by California Dep't of Fish & Game and by U.S. Fish & Wildlife Service.
COLORADO WATER NEWSBITS: San Luis Valley Cattlemen's Assn has expressed opposition to the plan to pump salvaged underground water from the San Luis Valley closed basin into the Rio Grande to help pay off interstate water debts imposed on Colorado by the Rio Grande compact. Further Gunnison River development will be proposed in a Bureau of Reclamation preliminary report now nearing completion. A $38 million project would be built around new upstream uses for Uncompahgre project's Taylor Park Reservoir. Alamosa, Huerfano and Conejos counties will benefit ($175,000) from recent Interior Dep't authorizations for accelerated public works conservation projects to create jobs. Included: 4 wells, 10 detention dams, 200 check dams, 13 small water projects. Arkansas Valley economic and population study (3 to 5 years) may be made by the state planning office if federal funds can be obtained.

Cloud seeding proposal by Irving P. Krick of Denver is being considered by Rocky Mountain Ski Area Operators Ass'n. Grand Mesa Water Users Assn. is negotiating with Krick for a 3-year cloud seeding program.

Fish reservoir construction is being stepped up by Colorado Game & Fish Dep't. Last year: 3 reservoirs covering 426 acres, cost $357,000. This year: 10 reservoirs, 1,700 acres, cost over $1 million. Reservoirs scheduled for 1963: Big Meadows (west of South Fork on Rio Grande), Clay Creek (3 miles southeast of Lamar), Dorchester (above Taylor Reservoir on Taylor River), Fortification
(6 miles north of Craig), Havilland (north of Durango), Michigan Creek (west of Walden), North Lake (southwest of Trinidad), Rock Creek (Gore Pass), Upper Piedra (30 miles north of Pagosa Springs), Upper Stillwater (below Stillwater Res. on Yampa River) . . .

Earth's crust is 30 miles thick in eastern Colorado, says U.S. Geological Survey following seismic probing during underground nuclear explosions . . . State Pollution Control Authority is suggested by a Lakewood man (Keith G. Hay) in a letter to the Denver Post . . . Dilution of pollutants was denied recognition as a beneficial use of water by Colorado Water Conservation Board at its last meeting . . . Narrows damsite has again been recommended over the Hardin (Weld County) site by Bureau of Reclamation's Denver development office. Next: Site recommendation by South Platte steering committee. Then Colorado Water Conservation Board site decision before June 1 . . . Grand Valley Water Users Assn's 1962 statistics indicate that an average of five acre feet was delivered for each acre of irrigable land. Deliveries in 1962 exceeded 101,000 acre feet . . . Salvation Ditch Co. of Aspen has been editorially applauded for its current ditch rehabilitation work.

Grand Junction Sentinel: "The improvements will enable the (Salvation) ditch to deliver more of the water to which the company has decrees, and the work is an example for other private ditch companies to do the work necessary to firm up their decrees to water.

"Whatever the fate of the current proposals to modify Colorado water law, stricter laws concerning water rights are inevitable. Paper rights won't be worth the paper they are written on without efforts to put the water to use in the future." (1-24-63)